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In replying please address:

25X1

August 15, 1958

Dear Sir:

Under Task Order No. C, the prototype full-scale (about 3,500 cu ft) hydrogen generator has been operated and evaluated, and minor modifications have been made. On the basis of your technical representatives' comments during and following a recently conducted experiment in the prototype full-scale unit, it appears, in general, that the unit incorporates the desired features and characteristics, and operates satisfactorily. Thus, the experimental activity under this Task Order has been substantially concluded. It is proposed herein that provision be made under Task Order No. C for additional effort directed toward the formulation of a recommended procedure to be followed by an operator when running the prototype hydrogen generator under actual service conditions.

As described by your technical representatives, some of the service conditions under which a hydrogen-generator unit of this type is likely to be used cannot be completely specified at this time; also, some of them could represent rigorous factors in relation to the chemical reaction or reactions on the basis of which the prototype unit has been designed and developed. It is

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currently anticipated, for example, that variations in the amount and/or type of impurities present in the water used, and also in the temperature of the water at the time of a particular operation, must be considered and provided for in the formulation of an operating procedure for the prototype generator unit.

Further, because of the limitations imposed by some of the specifications stated originally by your technical representatives for this development, the design of the prototype unit is such that certain steps in the procedure are critical to the effective generation operation. It is particularly essential that such steps be detailed appropriately in the operating procedure, so as to minimize the possibility of the operator erring in carrying out the instructions.

In view of the above, it is contemplated that, in the formulation of the operating procedure, the full-scale-experiment data would be analyzed in the light of the results obtained from the 1/5- and 1/10-scale experiments. If necessary, adjustments would be made in the previously determined relationship between catalyst concentration and initial temperature (for a particular total-generation time of interest). Then, the procedure for operating the prototype unit that would reflect the previously gained experience in handling the unit and conducting the basic chemical reaction or reactions would be detailed, step by step, with appropriate notes and precautions included, where necessary, to facilitate the effective operation of this unit. Efforts would

be made to present the instructions in simple, concise, easy-to-understand phraseology, and to provide suitable and effective illustrations.

At the conclusion of the proposed research period, a summary report would be prepared and submitted. This report would include a description of the experiments conducted and the results obtained, and also, in accord with the recent discussion with your technical representatives, the operating procedure described above. During the course of the proposed effort, liaison would be maintained with your technical representatives during their periodic visits and/or via telephone.

It is hereby proposed that the Task Order No. C agreement be amended to provide for an additional four-month effort, as described above, directed toward the formulation of an effective operating procedure for the prototype hydrogen generator. It is also proposed that the amendment provide for an increase in the estimated appropriation of $3,119, which includes an increase in the fixed fee of $177. A general breakdown of the estimated appropriation increase is attached.

Of course, the proposed amendment would continue our period-basis research agreement, consistent with our current contractual agreements.

It is currently expected that, on the basis of the experimental data obtained and the experience gained in handling the experimental 1/5-scale and the prototype full-scale generator units,

it will be possible to prepare a set of simple, concise, relatively foolproof operating instructions for ultimate use in connection with actual operations.

It would be extremely expedient to have available the prototype full-scale generator unit for use in connection with the proposed effort. Consequently, it is contemplated that the prototype unit would be shipped to your technical representatives toward the end of the proposed research period. If your technical representatives should have need for the prototype unit sooner, then, on the basis of mutual agreement, this unit would be furnished to them as quickly as possible.

We would appreciate any efforts that might be made to expedite consideration of the proposed amendment, so as to minimize the lapse in continuity of our activity under Task Order No. C. If you should have any questions with regard to the additional effort proposed herein, please do not hesitate to call us. Any inquiries of a contractual nature may be directed to [redacted] at Extension 159. 25X1

Very truly yours,

[redacted] 25X1

Vice President

[redacted] 25X1

In Duplicate